EPA

Form Approved
OMB No. 2010-0019
Approval Expires 12-3

CONTAINS NO CBI

91 APR -9 AM 9:30

OTS DOCUMENT RECEIPT OFC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Comprehensive Assessment Information Rule

REPORTING FORM

When completed, send this form to:	For Agency Use Only:
Document Processing Center Office of Toxic Substances, TS-790 U.S. Environmental Protection Agency 401 M Street, SW Washington, DC 20460 Attention: CAIR Reporting Office	Date of Receipt: _____ Document Control Number: _____ Docket Number: _____

EPA Form 7710-52

90-910000009

EPA-OTS

0010349487

SECTION 1 GENERAL MANUFACTURER, IMPORTER, AND PROCESSOR INFORMATION

PART A GENERAL REPORTING INFORMATION

1.01 This Comprehensive Assessment Information Rule (CAIR) Reporting Form has been completed in response to the Federal Register Notice of..... [1|2] [2|2] [8|8]
mo. day year

CBI

[ ] a. If a Chemical Abstracts Service Number (CAS No.) is provided in the Federal Register, list the CAS No. ..... [0|0|0|0|9|1]-[0|8]-[7]

b. If a chemical substance CAS No. is not provided in the Federal Register, list either (i) the chemical name, (ii) the mixture name, or (iii) the trade name of the chemical substance as provided in the Federal Register.

(i) Chemical name as listed in the rule ..... NA

(ii) Name of mixture as listed in the rule .... _____

(iii) Trade name as listed in the rule ..... _____

c. If a chemical category is provided in the Federal Register, report the name of the category as listed in the rule, the chemical substance CAS No. you are reporting on which falls under the listed category, and the chemical name of th substance you are reporting on which falls under the listed category.

Name of category as listed in the rule ..... NA

CAS No. of chemical substance ..... [ ][ ][ ][ ][ ][ ]-[ ][ ]-[ ]

Name of chemical substance ..... _____

1.02 Identify your reporting status under CAIR by circling the appropriate response(s).

CBI Manufacturer .....

[ ] Importer .....

(Processor) .....

X/P manufacturer reporting for customer who is a processor .....

X/P processor reporting for customer who is a processor .....

[ ] Mark (X) this box if you attach a continuation sheet.

1.03 Does the substance you are reporting on have an "x/p" designation associated with it in the above-listed Federal Register Notice?

CBI

[ ]

(Yes) ..... [ ] Go to question 1.

No ..... [ ] Go to question 1.

1.04 a. Do you manufacture, import, or process the listed substance and distribute it under a trade name(s) different than that listed in the Federal Register Notice? Circle the appropriate response.

CBI

[ ]

Yes .....

(No) .....

b. Check the appropriate box below:

[ ] You have chosen to notify your customers of their reporting obligations

Provide the trade name(s) .... (NA)

[ ] You have chosen to report for your customers

[ ] You have submitted the trade name(s) to EPA one day after the effective date of the rule in the Federal Register Notice under which you are reporting.

1.05 If you buy a trade name product and are reporting because you were notified of your reporting requirements by your trade name supplier, provide that trade name.

CBI

[ ]

Trade name ..... Stepanfoam BH614-T

Is the trade name product a mixture? Circle the appropriate response.

(Yes) .....

No .....

1.06 Certification -- The person who is responsible for the completion of this form must sign the certification statement below:

CBI

[ ] "I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate."

David Minerley	David Minerley	12/20/90
NAME	SIGNATURE	DATE SIGNED

Safety/Environ. Specialist	(607) 770 - 2000
TITLE	TELEPHONE NO.

[ ] Mark (X) this box if you attach a continuation sheet.

1.07 Exemptions From Reporting -- If you have provided EPA or another Federal agency with the required information on a CAIR Reporting Form for the listed substance within the past 3 years, and this information is current, accurate, and complete for the time period specified in the rule, then sign the certification below. You are required to complete section 1 of this CAIR form and provide any information now required but not previously submitted. Provide a copy of any previous submissions along with your Section 1 submission.

CBI

[ ]

"I hereby certify that, to the best of my knowledge and belief, all required information which I have not included in this CAIR Reporting Form has been submitted to EPA within the past 3 years and is current, accurate, and complete for the time period specified in the rule."

(NA)

NAME	SIGNATURE	DATE SIGNED
TITLE	( ) - TELEPHONE NO.	DATE OF PREVIOUS SUBMISSION

1.08 CBI Certification -- If you have asserted any CBI claims in this report you must certify that the following statements truthfully and accurately apply to all of those confidentiality claims which you have asserted.

CBI

[ ]

"My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures; the information is not, and has not been, reasonably ascertainable by other persons (other than government bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent; the information is not publicly available elsewhere; and disclosure of the information would cause substantial harm to my company's competitive position."

(NA)

NAME	SIGNATURE	DATE SIGNED
TITLE	( ) - TELEPHONE NO.	

[ ] Mark (X) this box if you attach a continuation sheet.

1.11 Parent Company Identification

CBI Name [G][E][N][E][R][A][L][ ][E][L][E][C][T][R][I][C][ ][C][O][m][P][A][N][Y][ ]

[ ] Address [6][O][O][ ][M][A][I][N][ ][S][T][R][E][E][T][ ][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[J][O][H][N][S][O][N][ ][C][I][T][Y][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
City

[N][Y] [1][3][7][9][0]--[ ][ ][ ]
State Zip

Dun & Bradstreet Number .....[0][0]-[2][2][3]-[5][1][8][2]

1.12 Technical Contact

CBI Name [D][A][V][I][D][ ][M][I][N][E][R][L][E][Y][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

[ ] Title [S][A][F][E][T][Y][ ][E][N][V][I][R][O][N][ ][S][P][E][C][.][ ][ ][ ][ ][ ][ ]

Address [6][O][O][ ][M][A][I][N][ ][S][T][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[J][O][H][N][S][O][N][ ][C][I][T][Y][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
City

[N][Y] [1][3][7][9][0]--[ ][ ][ ]
State Zip

Telephone Number .....[2][0][7]-[7][7][0]-[2][0][0][0]

1.13 This reporting year is from ..... [0][1] [8][8] to [1][2] [8][8]
Mo. Year Mo. Year

[ ] Mark (X) this box if you attach a continuation sheet.

1.14 Facility Acquired -- If you purchased this facility during the reporting year, provide the following information about the seller:

CBI Name of Seller [ ]

[ ] Mailing Address [ ]
Street

NA [ ]
City

[ ][ ] [ ][ ][ ][ ][ ]--[ ][ ][ ]
State Zip

Employer ID Number .....[ ][ ][ ][ ][ ][ ][ ]

Date of Sale .....[ ][ ] [ ][ ] [ ]
Mo. Day Y

Contact Person [ ]

Telephone Number .....[ ][ ][ ]-[ ][ ][ ]-[ ][ ][ ][ ]

1.15 Facility Sold -- If you sold this facility during the reporting year, provide the following information about the buyer:

CBI Name of Buyer [ ]

[ ] Mailing Address [ ]
Street

NA [ ]
City

[ ][ ] [ ][ ][ ][ ][ ]--[ ][ ][ ]
State Zip

Employer ID Number .....[ ][ ][ ][ ][ ][ ][ ]

Date of Purchase .....[ ][ ] [ ][ ] [ ]
Mo. Day Y

Contact Person [ ]

Telephone Number .....[ ][ ][ ]-[ ][ ][ ]-[ ][ ][ ][ ]

[ ] Mark (X) this box if you attach a continuation sheet.

1.16 For each classification listed below, state the quantity of the listed substance th
was manufactured, imported, or processed at your facility during the reporting year

CBI
[ ]

Classification	Quantity (kg y
Manufactured	0
Imported	0
Processed (include quantity repackaged)	4.1
Of that quantity manufactured or imported, report that quantity: (NA)	
In storage at the beginning of the reporting year	("U.K.")
For on-site use or processing	
For direct commercial distribution (including export)	
In storage at the end of the reporting year	
Of that quantity processed, report that quantity:	
In storage at the beginning of the reporting year	("U.K.")
Processed as a reactant (chemical producer)	NA
Processed as a formulation component (mixture producer)	NA
Processed as an article component (article producer)	4.1
Repackaged (including export)	NA
In storage at the end of the reporting year	("U.K.")

[ ] Mark (X) this box if you attach a continuation sheet.

PART C IDENTIFICATION OF MIXTURES

1.17 Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)

CBI

[ ]

Component Name	Supplier Name	Average % Composition by Weight (specify precision. e.g., 45% ± 0.5%)
2,6-Toluene Diisocyanate	Stepan Co.	18%
2,4-Toluene Diisocyanate	Stepan Co.	74%
("U.K.")	Stepan Co.	8%
	Total	100%

[ ] Mark (X) this box if you attach a continuation sheet.

2.04 State the quantity of the listed substance that your facility manufactured, imported or processed during the 3 corporate fiscal years preceding the reporting year in descending order.

CBI

[ ] Year ending ..... [1|2] Mo. [8|7] Year

Quantity manufactured ..... 0 k

Quantity imported ..... 0 k

Quantity processed ..... ≈ 10.6 k

Year ending ..... [1|2] Mo. [8|6] Year

Quantity manufactured ..... 0 k

Quantity imported ..... 0 k

Quantity processed ..... ≈ 7.4 k

Year ending ..... [1|2] Mo. [8|5] Year

Quantity manufactured ..... 0 k

Quantity imported ..... 0 k

Quantity processed ..... ("U.K.") k

2.05 Specify the manner in which you manufactured the listed substance. Circle all appropriate process types.

CBI

(NA)

[ ]

Continuous process .....

Semicontinuous process .....

Batch process .....

[ ] Mark (X) this box if you attach a continuation sheet.

2.06 CBI Specify the manner in which you processed the listed substance. Circle all appropriate process types.

[ ]

Continuous process .....

Semicontinuous process .....

(Batch process) .....

2.07 CBI State your facility's name-plate capacity for manufacturing or processing the liste substance. (If you are a batch manufacturer or batch processor, do not answer this question.)

[ ]

Manufacturing capacity ..... NA kg

Processing capacity ..... ("U.K.") kg

2.08 CBI If you intend to increase or decrease the quantity of the listed substance manufactured, imported, or processed at any time after your current corporate fisca year, estimate the increase or decrease based upon the reporting year's production volume.

[ ]

	Manufacturing Quantity (kg)	Importing Quantity (kg)	Processing Quantity (kg)
Amount of increase	NA	NA	NA
Amount of decrease	NA	NA	("U.K.")

[ ] **Mark (X) this box if you attach a continuation sheet.**

2.09 For the three largest volume manufacturing or processing process types involving the listed substance, specify the number of days you manufactured or processed the listed substance during the reporting year. Also specify the average number of hours per day each process type was operated. (If only one or two operations are involved, list those.)

CBI

[ ]

	Days/Year	Average Hours Per
Process Type #1 (The process type involving the largest quantity of the listed substance.)		
Manufactured	(NA)	(NA)
Processed	250	8
Process Type #2 (The process type involving the 2nd largest quantity of the listed substance.)		
Manufactured	(NA)	
Processed	(NA)	
Process Type #3 (The process type involving the 3rd largest quantity of the listed substance.)		
Manufactured	(NA)	
Processed	(NA)	

2.10 State the maximum daily inventory and average monthly inventory of the listed substance that was stored on-site during the reporting year in the form of a bulk chemical.

CBI

[ ]

Maximum daily inventory	("U.K.")
Average monthly inventory	("U.K.")

[ ] Mark (X) this box if you attach a continuation sheet.

2.11 Related Product Types -- List any byproducts, coproducts, or impurities present with the listed substance in concentrations greater than 0.1 percent as it is manufactured, imported, or processed. The source of byproducts, coproducts, or impurities means the source from which the byproducts, coproducts, or impurities are made or introduced into the product (e.g., carryover from raw material, reaction product, etc.).

CBI

[ ]

CAS No.	Chemical Name	Byproduct, Coproduct or Impurity[1]	Concentration (%) (specify ± % precision)	Source of Byproducts, Coproducts, or Impurities
584-84-9	2,4-Toluene Diisocyanate	C	74%	Raw Matl.

[1] Use the following codes to designate byproduct, coproduct, or impurity:

B = Byproduct
C = Coproduct
I = Impurity

[ ] Mark (X) this box if you attach a continuation sheet.

2.12 Existing Product Types -- List all existing product types which you manufactured, imported, or processed using the listed substance during the reporting year. List the quantity of listed substance you use for each product type as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI
[ ]

a. Product Types[1]	b. % of Quantity Manufactured, Imported, or Processed	c. % of Quantity Used Captively On-Site	d. Type of End-Users[2]
L	100%	0%	H

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/Sensitizer
D = Inhibitor/Stabilizer/Scavenger/Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additi
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additi
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) U.S. Government

[ ] Mark (X) this box if you attach a continuation sheet.

2.13 Expected Product Types -- Identify all product types which you expect to manufactur import, or process using the listed substance at any time after your current corporate fiscal year. For each use, specify the quantity you expect to manufactur import, or process for each use as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substan CBI used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further [ ] explanation and an example.)

a. Product Types[1]	b. % of Quantity Manufactured, Imported, or Processed	c. % of Quantity Used Captively On-Site	d. Type of End-Users
L	100%	0%	H

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/ Sensitizer
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additiv
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additiv
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) U.S. Government

[ ] Mark (X) this box if you attach a continuation sheet.

2.14 CBI [ ] Final Product -- Complete the following table for each type of final product manufactured, imported, or processed at your facility that contains the listed substance other than as an impurity.

NA

a. Product Type[1]	b. Final Product's Physical Form[2]	c. Average % Composition of Listed Substance in Final Product	d. Type of End-Users[3]

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/Sensitizer
D = Inhibitor/Stabilizer/Scavenger/Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additive
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additive
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the final product's physical form:

A = Gas
B = Liquid
C = Aqueous solution
D = Paste
E = Slurry
F1 = Powder
F2 = Crystalline solid
F3 = Granules
F4 = Other solid
G = Gel
H = Other (specify) _____

[3]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

2.15 CBI Circle all applicable modes of transportation used to deliver bulk shipments of the listed substance to off-site customers. (NA)

[ ] Truck .....

Railcar .....

Barge, Vessel .....

Pipeline .....

Plane .....

Other (specify) _____ .....

2.16 CBI Customer Use -- Estimate the quantity of the listed substance used by your customer or prepared by your customers during the reporting year for use under each category of end use listed (i-iv).

[ ] (NA)

Category of End Use

i. Industrial Products

Chemical or mixture ..... _____ kg

Article ..... _____ kg

ii. Commercial Products

Chemical or mixture ..... _____ kg

Article ..... _____ kg

iii. Consumer Products

Chemical or mixture ..... _____ kg

Article ..... _____ kg

iv. Other

Distribution (excluding export) ..... _____ kg

Export ..... _____ kg

Quantity of substance consumed as reactant ..... _____ kg

Unknown customer uses ..... _____ kg

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 3 PROCESSOR RAW MATERIAL IDENTIFICATION

PART A GENERAL DATA

3.01 Specify the quantity purchased and the average price paid for the listed substance for each major source of supply listed. Product trades are treated as purchases.
CBI The average price is the market value of the product that was traded for the listed substance.
[ ]

Source of Supply	Quantity (kg)	Average Pri (S/kg)
The listed substance was manufactured on-site.	(NA)	
The listed substance was transferred from a different company site.	(NA)	
The listed substance was purchased directly from a manufacturer or importer.	(NA)	
The listed substance was purchased from a distributor or repackager.	4.1	("U.K.")
The listed substance was purchased from a mixture producer.	(NA)	

3.02 Circle all applicable modes of transportation used to deliver the listed substance your facility.
CBI
[ ]

(Truck) .....

Railcar .....

Barge, Vessel .....

Pipeline .....

Plane .....

Other (specify) _____ .....

[ ] Mark (X) this box if you attach a continuation sheet.

3.03 CBI

a. Circle all applicable containers used to transport the listed substance to your facility.

[ ]

Bags 1

(Boxes) 2

Free standing tank cylinders 3

Tank rail cars 4

Hopper cars 5

Tank trucks 6

Hopper trucks 7

Drums 8

Pipeline 9

Other (specify) Metal Cans 10

b. If the listed substance is transported in pressurized tank cylinders, tank rail cars, or tank trucks, state the pressure of the tanks.

Tank cylinders ..... (NA) _____ mmHg

Tank rail cars ..... _____ mmHg

Tank trucks ..... _____ mmHg

[ ] Mark (X) this box if you attach a continuation sheet.

PART B RAW MATERIAL IN THE FORM OF A MIXTURE

3.04 If you obtain the listed substance in the form of a mixture, list the trade name(s) of the mixture, the name of its supplier(s) or manufacturer(s), an estimate of the
CBI average percent composition by weight of the listed substance in the mixture, and the amount of mixture processed during the reporting year.
[ ]

Trade Name	Supplier or Manufacturer	Average % Composition by Weight (specify ± % precision)	Amount Processed (kg/yr)
Stepanfoam BH614-T	Stepan Co.	18%	22.7

[ ] Mark (X) this box if you attach a continuation sheet.

PART C RAW MATERIAL VOLUME

3.05 CBI [ ] State the quantity of the listed substance used as a raw material during the reporting year in the form of a class I chemical, class II chemical, or polymer, and the percent composition, by weight, of the listed substance.

	Quantity Used (kg/yr)	% Composition by Weight of Listed Substance in Raw Material (specify ± % precision)
Class I chemical	22.7	18%
Class II chemical		
Polymer		

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 4 PHYSICAL/CHEMICAL PROPERTIES

General Instructions:

If you are reporting on a mixture as defined in the glossary, reply to questions in Sectio 4 that are inappropriate to mixtures by stating "NA -- mixture."

For questions 4.06-4.15, if you possess any hazard warning statement, label, MSDS, or other notice that addresses the information requested, you may submit a copy or reasonable facsimile in lieu of answering those questions which it addresses.

PART A PHYSICAL/CHEMICAL DATA SUMMARY

4.01 Specify the percent purity for the three major[1] technical grade(s) of the listed substance as it is manufactured, imported, or processed. Measure the purity of the substance in the final product form for manufacturing activities, at the time you import the substance, or at the point you begin to process the substance.

CBI

[ ]

(NA)

	Manufacture	Import	Process
Technical grade #1	_____% purity	_____% purity	_____% purit
Technical grade #2	_____% purity	_____% purity	_____% purit
Technical grade #3	_____% purity	_____% purity	_____% purit

[1]Major = Greatest quantity of listed substance manufactured, imported or processed.

4.02 Submit your most recently updated Material Safety Data Sheet (MSDS) for the listed substance, and for every formulation containing the listed substance. If you posses an MSDS that you developed and an MSDS developed by a different source, submit your version. Indicate whether at least one MSDS has been submitted by circling the appropriate response.

(Yes)

No

Indicate whether the MSDS was developed by your company or by a different source.

Your company

(Another source)

[ ] Mark (X) this box if you attach a continuation sheet.

GENERAL ELECTRIC COMPANY
600 MAIN STREET
JOHNSON CITY NY 13790

NF 00956 01 MATERIAL SAFETY DATA SHEET

DATE: 03/02/90 CUST # 39795-701 P.O.# 34929 PAGE: 1
PRODUCT NUMBER: 188478 PRODUCT NAME: STEPANFOAM BH-614-T

STEPAN COMPANY
NORTHFIELD, IL. 60093
(708) 446-7500

EMERGENCY INFORMATION
MEDICAL: 1-800-228-5635
CHEMTREC: 1-800-424-9300

SECTION I: GENERAL INFORMATION

PRODUCT NUMBER: 188478 PRODUCT NAME: STEPANFOAM BH-614-T
PRODUCT CLASS: TOLUENE DIISOCYANATE.
PRECAUTIONS: POISON.
REFER TO BILL OF LADING OR CONTAINER LABEL FOR DOT OR OTHER TRANSPORTATION HAZARD CLASSIFICATION, IF ANY.

SECTION II: HAZARDOUS INGREDIENTS

INGREDIENT (CAS #)	OSHA PEL (PPM)	ACGIH TLV (PPM)	OTHER

(CONTINUED)

S

O.K MAR 0 8 1990

NF 00956 01 MATERIAL SAFETY DATA SHEET

DATE: 03/02/90 CUST # 39795-701 P.O.# 34929 PAGE:
PRODUCT NUMBER: 188478 PRODUCT NAME: STEPANFOAM BH-614-T

TOLUENE-2,4-DIISOCYANATE (TDI) (C) (584-84-9) 74%	0.005	0.005	SARA 313
TOLUENE-2,6-DIISOCYANATE (TDI) (C) (91-08-7) 18%	0.005	0.005	SARA 313

NE = NOT ESTABLISHED.
NL = NOT LISTED.
(C) = IDENTIFIED AS A CARCINOGEN BY OSHA, IARC, OR NTP.

SECTION III: PHYSICAL/CHEMICAL DATA

BOILING POINT:
OVER 200 DEG F. (93 DEG C.).
% VOLATILE BY WEIGHT:
NIL
EVAPORATION RATE: ESTIMATED SLOWER THAN ETHYL ETHER.

VAPOR DENSITY: ESTIMATED HEAVIER THAN AIR.
WEIGHT PER GALLON:
10.0 LBS.

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (SETA FLASH CLOSED CUP):
OVER 200 DEG F. (93 DEG C.).
EXPLOSIVE LIMITS:
LOWER:
1%
EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, FOAM, OR WATER FOG. CLASS BC, ABC FIRE EXTINGUISHER.
SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED POSITIVE PRESSURE BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN.

SECTION V: REACTIVITY DATA

STABILITY: STABLE
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

(CONTINUED)

INCOMPATABILITY (MATERIALS TO AVOID):
STRONG OXIDIZING AGENTS
WATER, ALCOHOLS, AMINES, ALKALIES, METAL COMPOUNDS (CATALYSTS).
HAZARDOUS DECOMPOSITION PRODUCTS:
CYANIDES AND AMMONIA MAY BE FORMED.

SECTION VI: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE/EMERGENCY AND FIRST AID PROCEDURES

EYES: CONTACT WITH EYES IS PAINFUL AND IRRITATING.
FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.
SKIN: PROLONGED OR REPEATED CONTACT WITH SKIN CAUSES IRRITATION
WASH OFF SKIN WITH WATER. REMOVE CONTAMINATED CLOTHING AN
CLEAN BEFORE REUSE.
INHALATION: MAY CAUSE RESPIRATORY SENSITIZATION AND IRRITATE SKIN, EYES AND RESPIRATORY TRACT WITH POSSIBLE PERMANENT DECREASE IN LUNG FUNCTION. MAY AGGRAVATE ASTHMA OR OTHER PRE-EXISTING RESPIRATORY CONDITIONS.
INGESTION: IF SWALLOWED, CONSULT A PHYSICIAN IMMEDIATELY.

CHRONIC EFFECTS AND MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
CHRONIC EFFECTS AND MEDICAL CONDITIONS AGGRAVATED BY OVER-EXPOSURE TO THIS PRODUCT INCLUDE ASTHMA, OTHER RESPIRATORY DISORDERS (BRONCHITIS, EMPHYSEMA, BRONCHIAL HYPERREACTIVITY), SKIN ALLERGIES, ECZEMA. UNNECESSARY EXPOSURE TO THIS PRODUCT OR ANY CHEMICAL SHOULD BE AVOIDED.
IF ANY SYMPTOMS PERSIST, CONSULT A PHYSICIAN.
IN A NATIONAL TOXICOLOGY PROGRAM (NTP) STUDY, TDI WAS CARCINO-GENIC WHEN GIVEN ORALLY TO RATS AND MICE AT MAXIMUM TOLERATED DOSES. TDI WAS NOT CARCINOGENIC TO RATS IN A TWO-YEAR INHALATION STUDY.
SEE SECTION II FOR HAZARDOUS INGREDIENTS PRESENT IN THIS PRODUCT AND THEIR CORRESPONDING THRESHOLD LIMIT VALUES.

FOR ADDITIONAL MEDICAL INFORMATION, CALL 1-800-228-5635

SECTION VII: SPILL, LEAK, AND DISPOSAL PROCEDURES

CONTAIN ALL SPILLS AND LEAKS TO PREVENT DISCHARGE INTO THE ENVIRONMENT.
VENTILATE AREA.

(CONTINUED)

SMALL SPILLS: SOAK UP WITH ABSORBANT, SHOVEL INTO WASTE CONTAINER, FLUSH AREA WITH WATER.
LARGE SPILLS: RECOVER LIQUID FOR REPROCESSING OR DISPOSAL.
WASTE DISPOSAL: RECOVER MATERIAL OR DISPOSE (INCINERATION IS PREFERRED) IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. MATERIAL COLLECTED WITH ABSORBANT MAY BE DISPOSED IN A PERMITTED LANDFILL IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. EMPTY CONTAINER MAY RETAIN VAPOR OR PRODUCT RESIDUE. OBSERVE ALL LABELED SAFEGUARDS UNTIL CONTAINER IS CLEANED, RECONDITIONED, OR DESTROYED.

SECTION VIII: PROTECTIVE MEASURES

EYE PROTECTION: WEAR FULL FACE SHIELD OR GOGGLES WHEN HANDLING.
PROTECTIVE GLOVES: USE IMPERVIOUS GLOVES.
RESPIRATORY PROTECTION:
IF VAPORS ARE PRESENT, USE NIOSH OR MSHA APPROVED RESPIRATOR FO ORGANIC VAPORS, AIR-LINE RESPIRATOR, OR A SELF-CONTAINED BREATHING APPARATUS.
VENTILATION:
USE VENTILATION ADEQUATE TO KEEP HAZARDOUS INGREDIENTS BELOW THEIR TLV (SEE SECTION II).
OTHER PROTECTIVE EQUIPMENT:
WEAR PROTECTIVE CLOTHING TO PREVENT REPEATED OR PROLONGED CONTACT.
EYE WASH STATION AND SAFETY SHOWER SHOULD BE NEAR WORK AREA.

SECTION IX: SPECIAL PRECAUTIONS

HANDLING AND STORAGE:
AVOID OVERHEATING OR FREEZING.
AVOID OPEN FIRE OR FLAME.
OTHER PRECAUTIONS:
SPILLED MATERIAL IS SLIPPERY. WASH THOROUGHLY AFTER HANDLING. I INGESTED, CALL A PHYSICIAN.

DO NOT POUR INTO DRAINS, AS SOLIDS THAT FORM WILL PLUG SEWERS. 1% AMMONIA MAY BE USED TO NEUTRALIZE SPILLS.

(CONTINUED)

THIS DATA SHEET HAS BEEN ASSEMBLED BY THE MANUFACTURER BASED ON ITS OWN STUDIES AND ON THE WORK OF OTHERS. THE MANUFACTURER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, OR ADEQUACY OF THE INFORMATION CONTAINED HEREIN. THE MANUFACTURER SHALL NOT BE LIABLE (REGARDLESS OF FAULT) TO THE VENDEE, THE VENDEE'S EMPLOYEES, OR ANYONE FOR ANY DIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE ACCURACY, COMPLETENESS, ADEQUACY, OR FURNISHING OF SUCH INFORMATION.

****
****

(R) REGISTERED TRADEMARK OR APPLICATION PENDING.

4.03 Submit a copy or reasonable facsimile of any hazard information (other than an MSDS that is provided to your customers/users regarding the listed substance or any formulation containing the listed substance. Indicate whether this information has been submitted by circling the appropriate response.

Yes .....

(No) .....

4.04 For each activity that uses the listed substance, circle all the applicable number corresponding to each physical state of the listed substance during the activity listed. Physical states for importing and processing activities are determined at the time you import or begin to process the listed substance. Physical states for manufacturing, storage, disposal and transport activities are determined using the final state of the product.

CBI

[ ]

	Physical State				
Activity	Solid	Slurry	Liquid	Liquified Gas	G
Manufacture	1	2	3	4	
Import	1	2	3	4	
Process	(1)	(2)	(3)	4	
Store	1	(2)	(3)	4	
Dispose	(1)	(2)	(3)	4	
Transport	(1)	(2)	(3)	4	

[ ] Mark (X) this box if you attach a continuation sheet.

4.05 Particle Size -- If the listed substance exists in particulate form during any of the following activities, indicate for each applicable physical state the size and the percentage distribution of the listed substance by activity. Do not include particles ≥10 microns in diameter. Measure the physical state and particle sizes for importing and processing activities at the time you import or begin to process the listed substance. Measure the physical state and particle sizes for manufacturing storage, disposal and transport activities using the final state of the product.

CBI

[ ]

NA

Physical State		Manufacture	Import	Process	Store	Dispose	Transp
Dust	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Powder	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Fiber	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Aerosol	<1 micron						
	1 to <5 microns						
	5 to <10 microns						

[ ] **Mark (X) this box if you attach a continuation sheet.**

SECTION 5 ENVIRONMENTAL FATE

PART A RATE CONSTANTS AND TRANSFORMATION PRODUCTS

5.01 Indicate the rate constants for the following transformation processes.

a. Photolysis:

Absorption spectrum coefficient (peak) .... ("U.K.") (1/M cm) at ("U.K.") nm

Reaction quantum yield, ϕ ..... ("U.K.") at ("U.K.") nm

Direct photolysis rate constant, k_p, at ... ("U.K.") 1/hr ("U.K.") latitu

b. Oxidation constants at 25°C:

For $^1O_2$ (singlet oxygen), k_{ox} ..... ("U.K.") 1/M

For RO_2 (peroxy radical), k_{ox} ..... ("U.K.") 1/M

c. Five-day biochemical oxygen demand, BOD_5 ... ("U.K.") mg/

d. Biotransformation rate constant:

For bacterial transformation in water, k_b... ("U.K.") 1/h

Specify culture ..... ("U.K.")

e. Hydrolysis rate constants:

For base-promoted process, k_B ..... ("U.K.") 1/M

For acid-promoted process, k_A ..... ("U.K.") 1/M

For neutral process, k_N ..... ("U.K.") 1/h

f. Chemical reduction rate (specify conditions) ("U.K.")

g. Other (such as spontaneous degradation) ... ("U.K.")

[ ] Mark (X) this box if you attach a continuation sheet.

PART B PARTITION COEFFICIENTS

5.02 a. Specify the half-life of the listed substance in the following media.

Media	Half-life (specify units)
Groundwater	("U.K.")
Atmosphere	("U.K.")
Surface water	("U.K.")
Soil	("U.K.")

b. Identify the listed substance's known transformation products that have a half-life greater than 24 hours. ("U.K.")

CAS No.	Name	Half-life (specify units)	Media
			in
			in
			in
			in

5.03 Specify the octanol-water partition coefficient, K_{ow} ... ("U.K.") at 25°

Method of calculation or determination .....

5.04 Specify the soil-water partition coefficient, K_d ..... ("U.K.") at 25°

Soil type .....

5.05 Specify the organic carbon-water partition coefficient, K_{oc} ..... ("U.K.") at 25°

5.06 Specify the Henry's Law Constant, H ..... ("U.K.") atm-m^3/mol

[ ] Mark (X) this box if you attach a continuation sheet.

5.07 List the bioconcentration factor (BCF) of the listed substance, the species for wh it was determined, and the type of test used in deriving the BCF.

Bioconcentration Factor ("U.K")	Species	Test[1]

[1]Use the following codes to designate the type of test:

F = Flowthrough
S = Static

[ ] Mark (X) this box if you attach a continuation sheet.

6.04 CBI [ ] For each market listed below, state the quantity sold and the total sales value of the listed substance sold or transferred in bulk during the reporting year.

Market	Quantity Sold or Transferred (kg/yr)	Total Sales Value ($/yr)
Retail sales		
Distribution -- Wholesalers		
Distribution -- Retailers		
Intra-company transfer		
Repackagers		
Mixture producers		
Article producers		
Other chemical manufacturers or processors		
Exporters		
Other (specify)		
_____		

6.05 CBI [ ] Substitutes -- List all known commercially feasible substitutes that you know exis for the listed substance and state the cost of each substitute. A commercially feasible substitute is one which is economically and technologically feasible to u in your current operation, and which results in a final product with comparable performance in its end uses.

Substitute	Cost ($/kg)
None Presently Identified	

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 7 MANUFACTURING AND PROCESSING INFORMATION

General Instructions:

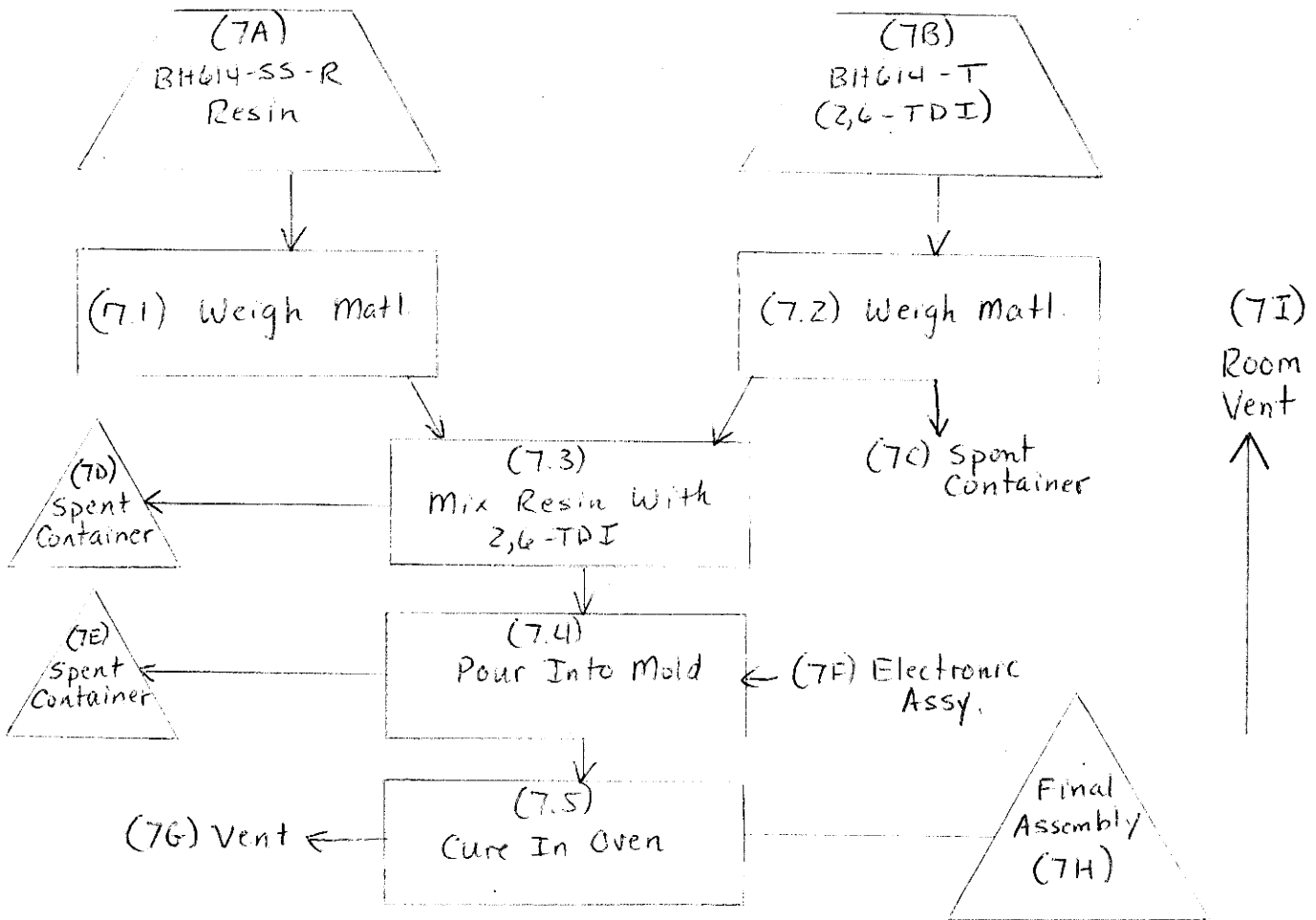
For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

7.01 **In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.**

CBI

[ ] **Process type .....** Encapsulation / Potting



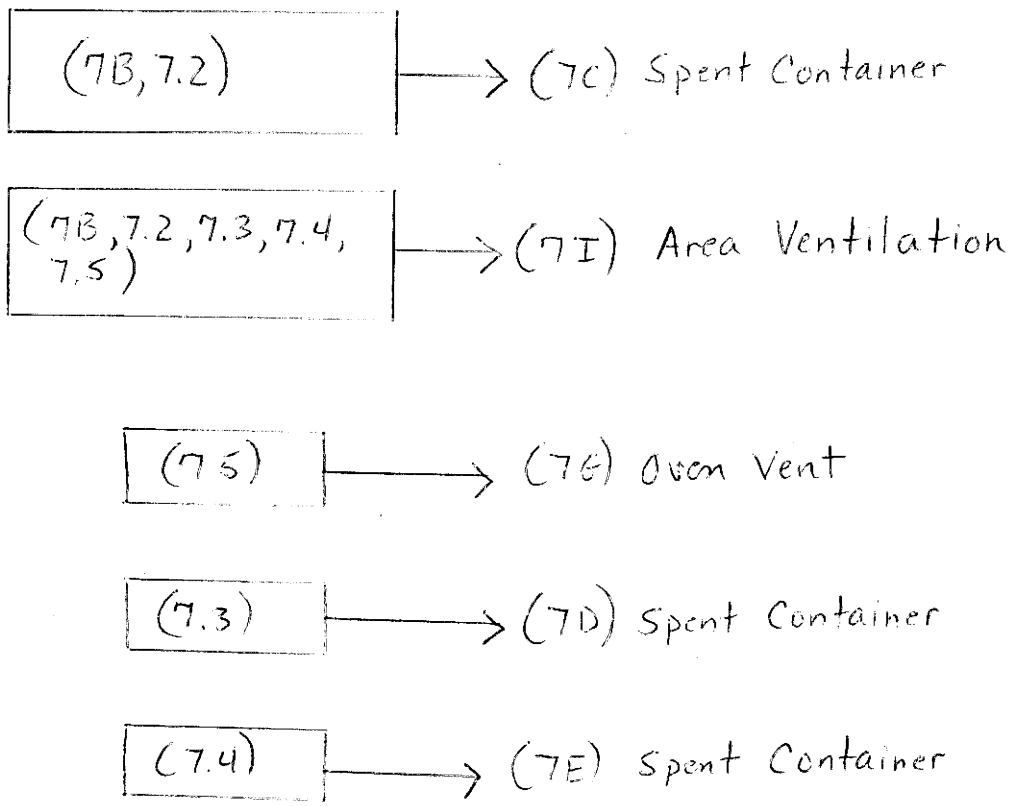
[ ] **Mark (X) this box if you attach a continuation sheet.**

7.03 In accordance with the instructions, provide a process block flow diagram showing a process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if no treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

[ ] Process type ..... Encapsulating / Potting

(See Page 42)



[ ] **Mark (X) this box if you attach a continuation sheet.**

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for mor than one process type, photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Encapsulating / Potting

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composit:
7.1	Paper Cup	Room	Room	Paper
7.2	Paper Cup	Room	Room	Paper
7.3	Paper Cup	Room	Room	Paper
7.4	Mold	Room	Room	RTV, Al
7.5	Oven	110° ± 5°	Room	Steel

[ ] Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Encapsulating / Potting

Process Stream ID Code	Process Stream Description	Physical State[1]	Stream Flow (kg/yr)
(7A)	BH-614-55-R	OL	≈ 32
(7B)	BH-614-T (2,6-TDI)	OL	≈ 22.7
(7C)	Spent Paper Cup	OL	≈ .227
(7D)	Spent Paper Cup	OL	("U.K.")
(7E)	Spent Container	SO	NA
(7F)	Electronic Assy.	SO	NA
(7G)	Oven Vent	GU	("U.K.")
(7H)	Final Assy.	SO	(NA)
(7I)	Room Vent	GU	("U.K.")

[1] Use the following codes to designate the physical state for each process stream:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[ ] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocc this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Encapsulating / Potting

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7A	BH-614-SS-R	100%	None	NA
7B	BH-614-T	100%	2,6-TDI	18%
			2,4-TDI	74%
7C	BH-614-T	100%	2,6-TDI	18%
			2,4-TDI	74%
7D	Mixed Resin	100%	None	NA
7E	Solidified Resin	100%	Ammonia	("U.K.")
7F	NA	NA	NA	NA
7G	Isocyanates	("U.K.")	NA	NA
	Ammonia	("U.K.")	NA	NA
7H	NA	NA	NA	NA
7I	Isocyanates	("U.K.")	NA	NA

7.06 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

7.06 (continued)

[1]For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each componer Assign an additive package number to each additive package and list this number : column b. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1		
2		
3		
4		
5		

NA

[2]Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

[3]Use the following codes to designate how the concentration was measured:

V = Volume
W = Weight

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 8 RESIDUAL TREATMENT GENERATION, CHARACTERIZATION, TRANSPORTATION, AND MANAGEMENT

General Instructions:

For questions 8.04-8.06, provide a separate response for each residual treatment block fl diagram provided in question 8.01, 8.02 or 8.03. Identify the process type from which th information is extracted.

For questions 8.05-8.33, the Stream Identification Codes are those process streams listed in either the Section 7 or Section 8 block flow diagrams which contain residuals for each applicable waste management method.

For questions 8.07-8.33, if residuals are combined before they are handled, list those Stream Identification Codes on the same line.

Questions 8.09-8.33 refer to the waste management activities involving the residuals identified in either the Section 7 or Section 8 block flow diagrams. Not all Stream Identification Codes used in the sample answers (e.g., for the incinerator questions) hav corresponding process streams identified in the block flow diagram(s). These Stream Identification codes are for illustrative purposes only.

For questions 8.11-8.33, if you have provided the information requested on one of the EPA Office of Solid Waste surveys listed below within the three years prior to your reporting year, you may submit a copy or reasonable facsimile in lieu of answering those questions which the survey addresses. The applicable surveys are: (1) Hazardous Waste Treatment, Storage, Disposal, and Recycling Survey; (2) Hazardous Waste Generator Survey; or (3) Subtitle D Industrial Facility Mail Survey.

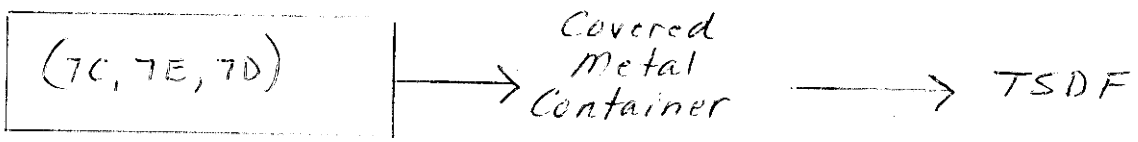
[ ] Mark (X) this box if you attach a continuation sheet.

PART A RESIDUAL TREATMENT PROCESS DESCRIPTION

8.01 In accordance with the instructions, provide a residual treatment block flow diagra- which describes the treatment process used for residuals identified in question 7...

CBI

[ ] Process type ..... Encapsulating / Potting



[ ] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than o process type, photocopy this question and complete it separately for each process
CBI type. (Refer to the instructions for further explanation and an example.)

[ ] Process type ..... Encapsulating / Potting

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
7C	T	OL	2,4-TDI	74%	("U.K.")	("U.K.")
			2,6-TDI	18%	("U.K.")	("U.K.")
7D	T	OL	2,4-TDI	74%	("U.K.")	("U.K.")
			2,6-TDI	18%	("U.K.")	("U.K.")
7E	NA	SO	("U.K.")	NA	NA	NA

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

Use the following codes to designate the type of hazardous waste:

I = Ignitable
C = Corrosive
R = Reactive
E = EP toxic
T = Toxic
H = Acutely hazardous

Use the following codes to designate the physical state of the residual:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

[3]For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each componer Assign an additive package number to each additive package and list this number i column d. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1	NA	
2		
3		
4		
5		

[4]Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

[5]Use the following codes to designate how the concentration was measured:

V = Volume
W = Weight

NA

[6]Specify the analytical test methods used and their detection limits in the table below. Assign a code to each test method used and list those codes in column e.

Code	Method	Detection Limit (± ug/l)
1		
2		
3		
4		
5		
6		

[ ] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than o process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Encapsulating / Potting

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes Manageme Methods
7C	B67/B69	1ST	.227	100%		("U.K.")	NA
7D	B67/B69	1ST	("U.K")	100%		("U.K.")	NA
7E	B82	1ST	("U.K")	100%		("U.K.")	

[1] Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2] Use the codes provided in Exhibit 8-2 to designate the management methods

[ ] Mark (X) this box if you attach a continuation sheet.

EXHIBIT 8-1.
(Refers to question 8.06(b))

WASTE DESCRIPTION CODES

These waste description codes were developed specifically for this survey to supplement the descriptions used with the RCRA and other waste codes. (These waste description codes are not regulatory definitions.)

WASTE DESCRIPTION CODES FOR HAZARDOUS WASTE DESCRIBED BY A SINGLE RCRA F, K, P, OR U WASTE CODE

A01 Spent solvent (F001-F005, K086)
A02 Other organic liquid (F001-F005, K086)
A03 Still bottom (F001-F005, K086)
A04 Other organic sludge (F001-F005, K086)
A05 Wastewater or aqueous mixture
A06 Contaminated soil or cleanup residue
A07 Other F or K waste, exactly as described*
A08 Concentrated off-spec or discarded product
A09 Empty containers
A10 Incinerator ash
A11 Solidified treatment residue
A12 Other treatment residue (specify in "Facility Notes")
A13 Other untreated waste (specify in "Facility Notes")

* "Exactly as described" means that the waste matches the description of the RCRA waste code

INORGANIC LIQUIDS—Waste that is primarily inorganic and liquid (e.g., aqueous) with low suspended inorganic solids and low organic content

801 Aqueous waste with low solvents
802 Aqueous waste with low other toxic organics
803 Spent acid with metals
804 Spent acid without metals
805 Acidic aqueous waste
806 Caustic solution with metals but no cyanides
807 Caustic solution with metals and cyanides
808 Caustic solution with cyanides but no metals
809 Spent caustic
810 Caustic aqueous waste
811 Aqueous waste with reactive sulfides
812 Aqueous waste with other reactives (e.g., explosives)
813 Other aqueous waste with high dissolved solids
814 Other aqueous waste with low dissolved solids
815 Scrubber water
816 Leachate
817 Waste liquid mercury
818 Other inorganic liquid (specify in "Facility Notes")

INORGANIC SLUDGES—Waste that is primarily inorganic, with moderate-to-high water content and low organic content; pumpable.

819 Lime sludge without metals
820 Lime sludge with metals/metal hydroxide sludge
821 Wastewater treatment sludge with toxic organics
822 Other wastewater treatment sludge
823 Untreated plating sludge without cyanides
824 Untreated plating sludge with cyanides
825 Other sludge with cyanides
826 Sludge with reactive sulfides
827 Sludge with other reactives
828 Degreasing sludge with metal scale or filings
829 Air pollution control device sludge (e.g., fly ash, wet scrubber sludge)
830 Sediment or lagoon dragout contaminated with organics
831 Sediment or lagoon dragout contaminated with inorganics only
832 Drilling mud
833 Asbestos slurry or sludge
834 Chloride or other brine sludge
835 Other inorganic sludge (specify in "Facility Notes")

INORGANIC SOLIDS—Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; not pumpable

836 Soil contaminated with organics
837 Soil contaminated with inorganics only
838 Ash, slag, or other residue from incineration of wastes
839 Other "dry" ash, slag, or thermal residue
840 "Dry" lime or metal hydroxide solids chemically "fixed"
841 "Dry" lime or metal hydroxide solids not "fixed"
842 Metal scale, filings, or scrap
843 Empty or crushed metal drums or containers
844 Batteries or battery parts, casings, cores
845 Spent solid filters or adsorbents
846 Asbestos solids and debris
847 Metal-cyanide salts/chemicals
848 Reactive cyanide salts/chemicals
849 Reactive sulfide salts/chemicals
850 Other reactive salts/chemicals
851 Other metal salts/chemicals
852 Other waste inorganic chemicals
853 Lab packs of old chemicals only
854 Lab packs of debris only
855 Mixed lab packs
856 Other inorganic solids (specify in "Facility Notes")

INORGANIC GASES—Waste that is primarily inorganic with a low organic content and is a gas at atmospheric pressure.

857 Inorganic gases

ORGANIC LIQUIDS—Waste that is primarily organic and is highly fluid, with low inorganic solids content and low-to-moderate water content.

858 Concentrated solvent-water solution
859 Halogenated (e.g., chlorinated) solvent
860 Nonhalogenated solvent
861 Halogenated/nonhalogenated solvent mixture
862 Oil-water emulsion or mixture
863 Waste oil
864 Concentrated aqueous solution of other organics
865 Concentrated phenolics
866 Organic paint, ink, lacquer, or varnish
867 Adhesives or epoxies
868 Paint thinner or petroleum distillates
869 Reactive or polymerizable organic liquid
870 Other organic liquid (specify in "Facility Notes")

ORGANIC SLUDGES—Waste that is primarily organic, with low-to-moderate inorganic solids content and water content; pumpable

871 Still bottoms of halogenated (e.g., chlorinated) solvents or other organic liquids
872 Still bottoms of nonhalogenated solvents or other organic liquids
873 Oily sludge
874 Organic paint or ink sludge
875 Reactive or polymerizable organics
876 Resins, tars, or tarry sludge
877 Biological treatment sludge
878 Sewage or other untreated biological sludge
879 Other organic sludge (specify in "Facility Notes")

ORGANIC SOLIDS—Waste that is primarily organic and solid, with low-to-moderate inorganic content and water content; not pumpable.

880 Halogenated pesticide solid
881 Nonhalogenated pesticide solid
882 Solid resins or polymerized organics
883 Spent carbon
884 Reactive organic solid
885 Empty fiber or plastic containers
886 Lab packs of old chemicals only
887 Lab packs of debris only
888 Mixed lab packs
889 Other halogenated organic solid
890 Other nonhalogenated organic solid

ORGANIC GASES—Waste that is primarily organic with low-to-moderate inorganic content and is a gas at atmospheric pressure.

891 Organic gases

EXHIBIT 8-2.
(Refers to question 8.06(c))

MANAGEMENT METHODS

M1 = Discharge to publicly owned wastewater treatment works
M2 = Discharge to surface water under NPDES
M3 = Discharge to off-site, privately owned wastewater treatment works
M4 = Scrubber: a) caustic; b) water; c) other
M5 = Vent to: a) atmosphere; b) flare; c) other (specify)_____
M6 = Other (specify)_____

TREATMENT AND RECYCLING

Incineration/thermal treatment
1I Liquid injection
2I Rotary or rocking kiln
3I Rotary kiln with a liquid injection unit
4I Two stage
5I Fixed hearth
6I Multiple hearth
7I Fluidized bed
8I Infrared
9I Fume/vapor
10I Pyrolytic destructor
11I Other incineration/thermal treatment

Reuse as fuel
1RF Cement kiln
2RF Aggregate kiln
3RF Asphalt kiln
4RF Other kiln
5RF Blast furnace
6RF Sulfur recovery furnace
7RF Smelting, melting, or refining furnace
8RF Coke oven
9RF Other industrial furnace
10RF Industrial boiler
11RF Utility boiler
12RF Process heater
13RF Other reuse as fuel unit

Fuel Blending
1FB Fuel blending

Solidification
1S Cement or cement/silicate processes
2S Pozzolanic processes
3S Asphaltic processes
4S Thermoplastic techniques
5S Organic polymer techniques
6S Jacketing (macro-encapsulation)
7S Other solidification

Recovery of solvents and liquid organics for reuse
1SR Fractionation
2SR Batch still distillation
3SR Solvent extraction
4SR Thin-film evaporation
5SR Filtration
6SR Phase separation
7SR Dessication
8SR Other solvent recovery

Recovery of metals
1MR Activated carbon (for metals recovery)
2MR Electrodialysis (for metals recovery)
3MR Electrolytic metal recovery
4MR Ion exchange (for metals recovery)
5MR Reverse osmosis (for metals recovery)
6MR Solvent extraction (for metals recovery)
7MR Ultrafiltration (for metals recovery)
8MR Other metals recovery

Wastewater Treatment
After each wastewater treatment type listed below (1WT - 66WT) specify a) tank; or b) surface impoundment (i.e., 63WTa)

Equalization
1WT Equalization

Cyanide oxidation
2WT Alkaline chlorination
3WT Ozone
4WT Electrochemical
5WT Other cyanide oxidation

General oxidation (including disinfection)
6WT Chlorination
7WT Ozonation
8WT UV radiation
9WT Other general oxidation

Chemical precipitation[1]
10WT Lime
11WT Sodium hydroxide
12WT Soda ash
13WT Sulfide
14WT Other chemical precipitation

Chromium reduction
15WT Sodium bisulfite
16WT Sulfur dioxide

EXHIBIT 8-2. (continued)

MANAGEMENT METHODS

17WT Ferrous sulfate
18WT Other chromium reduction

Complexed metals treatment (other than chemical precipitation by pH adjustment)
19WT Complexed metals treatment

Emulsion breaking
20WT Thermal
21WT Chemical
22WT Other emulsion breaking

Adsorption
23WT Carbon adsorption
24WT Ion exchange
25WT Resin adsorption
26WT Other adsorption

Stripping
27WT Air stripping
28WT Steam stripping
29WT Other stripping

Evaporation
30WT Thermal
31WT Solar
32WT Vapor recompression
33WT Other evaporation

Filtration
34WT Diatomaceous earth
35WT Sand
36WT Multimedia
37WT Other filtration

Sludge dewatering
38WT Gravity thickening
39WT Vacuum filtration
40WT Pressure filtration (belt, plate and frame, or leaf)
41WT Centrifuge
42WT Other sludge dewatering

Air flotation
43WT Dissolved air flotation
44WT Partial aeration
45WT Air dispersion
46WT Other air flotation

Oil skimming
47WT Gravity separation
48WT Coalescing plate separation
49WT Other oil skimming

Other liquid phase separation
50WT Decanting
51WT Other liquid phase separation

Biological treatment
52WT Activated sludge
53WT Fixed film-trickling filter
54WT Fixed film-rotating contactor
55WT Lagoon or basin, aerated
56WT Lagoon, facultative
57WT Anaerobic
58WT Other biological treatment

Other wastewater treatment
59WT Wet air oxidation
60WT Neutralization
61WT Nitrification
62WT Denitrification
63WT Flocculation and/or coagulation
64WT Settling (clarification)
65WT Reverse osmosis
66WT Other wastewater treatment

OTHER WASTE TREATMENT

1TR Other treatment
2TR Other recovery for reuse

ACCUMULATION

1A Containers
2A Tanks

STORAGE

1ST Container (i.e., barrel, drum)
2ST Tank
3ST Waste pile
4ST Surface impoundment
5ST Other storage

DISPOSAL

1D Landfill
2D Land treatment
3D Surface impoundment (to be closed as a landfill)
4D Underground injection well

---

[1]Chemical precipitation is a treatment operation whereby the pH of a waste is adjusted to the range necessary for removal (precipitation) of contaminants. However, if the pH is adjusted solely to achieve a neutral pH, THE OPERATION SHOULD BE CONSIDERED NEUTRALIZATION (60WT).

8.22 Describe the combustion chamber design parameters for each of the three largest (by capacity) incinerators that are used on-site to burn the residuals identified i
CBI your process block or residual treatment block flow diagram(s).

[ ]

Incinerator	Combustion Chamber Temperature (°C)		Location of Temperature Monitor		Residence Time In Combustion Chamber (seconds)	
	Primary	Secondary	Primary	Secondary	Primary	Seconda
1						
2						
3						

Indicate if Office of Solid Waste survey has been submitted in lieu of respons
by circling the appropriate response.

Yes .....

No .....

8.23 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual
CBI treatment block flow diagram(s).

[ ]

N/A

Incinerator	Air Pollution Control Device[1]	Types of Emissions Data Available
1		
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of respons
by circling the appropriate response.

Yes .....

No .....

---

[1] Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)
E = Electrostatic precipitator
O = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 9 WORKER EXPOSURE

General Instructions:

Questions 9.03-9.25 apply only to those processes and workers involved in manufacturing or processing the listed substance. Do not include workers involved in residual waste treatment unless they are involved in this treatment process on a regular basis (i.e., exclude maintenance workers, construction workers, etc.).

[ ] Mark (X) this box if you attach a continuation sheet.

PART A EMPLOYMENT AND POTENTIAL EXPOSURE PROFILE

9.01 Mark (X) the appropriate column to indicate whether your company maintains records c the following data elements for hourly and salaried workers. Specify for each data element the year in which you began maintaining records and the number of years the CBI records for that data element are maintained. (Refer to the instructions for furthe explanation and an example.)

[ ]

Data Element	Data are Maintained for: Hourly Workers	Salaried Workers	Year in Which Data Collection Began	Number of Years Records Are Maintaine
Date of hire	X	X	1949	Permanent
Age at hire	X	X	1949	Permanent
Work history of individual before employment at your facility	X	X	1949	Permanent
Sex	X	X	1949	Permanent
Race	X	X	1949	Permanent
Job titles	X	X	1949	Permanent
Start date for each job title	X	X	1949	Permanent
End date for each job title	X	X	1949	Permanent
Work area industrial hygiene monitoring data	X	X	("U.K.")	Permanent
Personal employee monitoring data	X	X	("U.K.")	Permanent
Employee medical history	X	X	1949	Permanent
Employee smoking history	X	X	1980	Permanent
Accident history	X	X	1949	Permanent
Retirement date	X	X	1949	Permanent
Termination date	X	X	1949.	Permanent
Vital status of retirees	X	X	("U.K.")	N.A.
Cause of death data	X	X	1949	Permanent

[ ] Mark (X) this box if you attach a continuation sheet.

9.02 In accordance with the instructions, complete the following table for each activity in which you engage.

CBI

[ ]

a. Activity	b. Process Category	c. Yearly Quantity (kg)	d. Total Workers	e. Total Worker-Hour
Manufacture of the listed substance	Enclosed	NA		
	Controlled Release	NA		
	Open	NA		
On-site use as reactant	Enclosed	NA		
	Controlled Release	NA		
	Open	NA		
On-site use as nonreactant	Enclosed	NA		
	Controlled Release	NA		
	Open	NA		
On-site preparation of products	Enclosed	NA		
	Controlled Release	4.1	5	("U.K.")
	Open	NA		

[ ] Mark (X) this box if you attach a continuation sheet.

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

[ ]

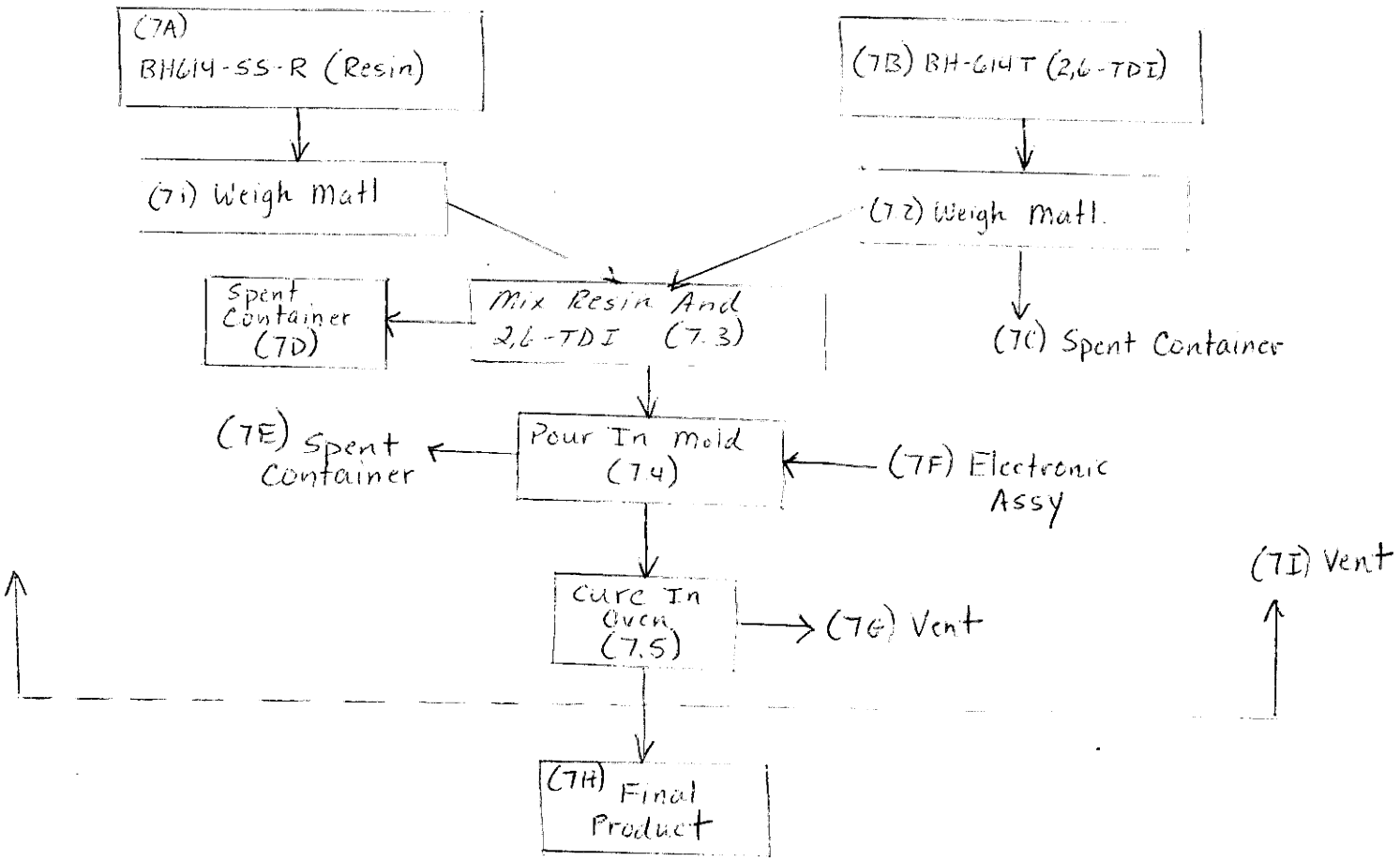
Labor Category	Descriptive Job Title
A	Potting Operator
B	
C	
D	
E	
F	
G	
H	
I	
J	

[ ] Mark (X) this box if you attach a continuation sheet.

9.04 **In accordance with the instructions, provide your process block flow diagram(s) and indicate associated work areas.**

CBI

[ ] **Process type .....** Encapsulating / Potting
Operator Contacts Entire Area



[ ] **Mark (X) this box if you attach a continuation sheet.**

9.05 Describe the various work area(s) shown in question 9.04 that encompass workers wh may potentially come in contact with or be exposed to the listed substance. Add a additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Encapsulating / Potting

Work Area ID	Description of Work Areas and Worker Activities
1	Hooded Work Station (Mix & Pour)
2	Vented Oven (Bake)
3	
4	
5	
6	
7	
8	
9	
10	

[ ] Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and fo each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this questio and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 1

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance[1]	Average Length of Exposure Per Day[2]	Number o Days per Year Exposed
A	5	Skin/Inhalation	OL	D, E	250

[1]Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure; includes fumes, vapors, etc.)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[2]Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
B = Greater than 15 minutes, but not exceeding 1 hour
C = Greater than one hour, but not exceeding 2 hours
D = Greater than 2 hours, but not exceeding 4 hours
E = Greater than 4 hours, but not exceeding 8 hours
F = Greater than 8 hours

[ ] Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05. and fo each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this questio and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 2

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance[1]	Average Length of Exposure Per Day[2]	Number o Days per Year Exposed
A	5	Skin / Inhalation	OL	B, C	("U.K.")

[1]Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure; includes fumes, vapors, etc.)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[2]Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
B = Greater than 15 minutes, but not exceeding 1 hour
C = Greater than one hour, but not exceeding 2 hours
D = Greater than 2 hours, but not exceeding 4 hours
E = Greater than 4 hours, but not exceeding 8 hours
F = Greater than 8 hours

[ ] Mark (X) this box if you attach a continuation sheet.

9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 2

Labor Category	8-hour TWA Exposure Level (ppm, mg/m³, other-specify)	15-Minute Peak Exposure Level (ppm, mg/m³, other-specify)
A	("U.K.")	("U.K.")

[ ] Mark (X) this box if you attach a continuation sheet.

9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 1

Labor Category	8-hour TWA Exposure Level (ppm, mg/m^3, other-specify)	15-Minute Peak Exposure Level (ppm, mg/m^3, other-specify)
A	("U.K.")	("U.K.")

[ ] Mark (X) this box if you attach a continuation sheet.

PART B WORK PLACE MONITORING PROGRAM

9.08 If you monitor worker exposure to the listed substance, complete the following table

CBI

[ ]

NA

Sample/Test	Work Area ID	Testing Frequency (per year)	Number of Samples (per test)	Who Samples[1]	Analyzed In-House (Y/N)	Number of Years Record Maintained
Personal breathing zone						
General work area (air)						
Wipe samples						
Adhesive patches						
Blood samples						
Urine samples						
Respiratory samples						
Allergy tests						
Other (specify) _____						
Other (specify) _____						
Other (specify) _____						

[1]Use the following codes to designate who takes the monitoring samples:

A = Plant industrial hygienist
B = Insurance carrier
C = OSHA consultant
D = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

9.09 For each sample type identified in question 9.08, describe the type of sampling and analytical methodology used for each type of sample.

CBI

[ ]	Sample Type	Sampling and Analytical Methodology

NA

9.10 If you conduct personal and/or ambient air monitoring for the listed substance, specify the following information for each equipment type used.

CBI

[ ]	Equipment Type[1]	Detection Limit[2]	Manufacturer	Averaging Time (hr)	Model Number

NA

[1]Use the following codes to designate personal air monitoring equipment types:

A = Passive dosimeter
B = Detector tube
C = Charcoal filtration tube with pump
D = Other (specify) _____

Use the following codes to designate ambient air monitoring equipment types:

E = Stationary monitors located within work area
F = Stationary monitors located within facility
G = Stationary monitors located at plant boundary
H = Mobile monitoring equipment (specify) _____
I = Other (specify) _____

[2]Use the following codes to designate detection limit units:

A = ppm
B = Fibers/cubic centimeter (f/cc)
C = Micrograms/cubic meter ($\mu g/m^3$)

[ ] Mark (X) this box if you attach a continuation sheet.

9.11 If you conduct routine medical tests for monitoring the health effects of exposure to the listed substance, specify the type and frequency of the tests.

CBI

[ ]	Test Description	Frequency (weekly, monthly, yearly, etc.)

NA

[ ] Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposur to the listed substance. Photocopy this question and complete it separately for ea process type and work area.

CBI

[ ] Process type ..... – Encapsulating / Potting

Work area 1

Engineering Controls	Used (Y/N)	Year Installed	Upgraded (Y/N)	Year Upgrade
Ventilation:				
Local exhaust	Y	("U.K.")	N	NA
General dilution	Y	("U.K.")	N	NA
Other (specify)				
Vessel emission controls	N		N	
Mechanical loading or packaging equipment	N		N	
Other (specify)				

[ ] Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposu to the listed substance. Photocopy this question and complete it separately for ea process type and work area.

CBI

[ ] Process type ..... — Encapsulating / Potting

Work area 2

Engineering Controls	Used (Y/N)	Year Installed	Upgraded (Y/N)	Year Upgrade
Ventilation:				
Local exhaust	Y	("U.K.")	N	NA
General dilution	Y	("U.K.")	N	NA
Other (specify)				
Vessel emission controls	N	N		
Mechanical loading or packaging equipment	N	N		
Other (specify)				

[ ] Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 2

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)
NA	

[ ] Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 1

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)
NA	

[ ] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 1

Equipment Types	Wear or Use (Y/N)
Respirators	N
Safety goggles/glasses	Y
Face shields	N
Coveralls	N
Bib aprons	N
Chemical-resistant gloves	Y
Other (specify)	

[ ] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating / Potting

Work area 2

Equipment Types	Wear or Use (Y/N)
Respirators	N
Safety goggles/glasses	Y
Face shields	N
Coveralls	N
Bib aprons	N
Chemical-resistant gloves	Y
Other (specify)	

[ ] Mark (X) this box if you attach a continuation sheet.

9.15 If workers use respirators when working with the listed substance, specify for each process type, the work areas where the respirators are used, the type of respirators used, the average usage, whether or not the respirators were fit tested, and the type and frequency of the fit tests. Photocopy this question and complete it separately for each process type.

CBI

NA

[ ] Process type ..... _____

Work Area	Respirator Type	Average Usage[1]	Fit Tested (Y/N)	Type of Fit Test[2]	Frequency of Fit Tests (per year)

[1]Use the following codes to designate average usage:

A = Daily
B = Weekly
C = Monthly
D = Once a year
E = Other (specify) _____

[2]Use the following codes to designate the type of fit test:

QL = Qualitative
QT = Quantitative

[ ] Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this CBI question and complete it separately for each process type and work area.

[ ]

Process type ..... Encapsulating / Potting

Work area 1

① Employee Follows Written Procedure

② Local Ventilation

9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type ..... Encapsulating / Potting

Work area 1

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping	✓			
Vacuuming	NA			
Water flushing of floors	NA			
Other (specify)				
Small Wipe-Ups	✓			

[ ] Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this CBI question and complete it separately for each process type and work area.

[ ]

Process type ..... Encapsulating / Potting

Work area 2

① Employee Follows Written Procedure

② Local Ventilation

9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type .....

Work area .....

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping	✓			
Vacuuming	NA			
Water flushing of floors	NA			
Other (specify)				
Small Wipe-Ups	✓			

[ ] Mark (X) this box if you attach a continuation sheet.

9.21 Do you have a written medical action plan for responding to routine or emergency exposure to the listed substance?

Routine exposure

Yes .....

No .....

Emergency exposure

Yes .....

No .....

If yes, where are copies of the plan maintained?

Routine exposure: _____

Emergency exposure: _____

9.22 Do you have a written leak and spill cleanup plan that addresses the listed substance? Circle the appropriate response.

(Yes) .....

No .....

If yes, where are copies of the plan maintained? MSDS In Foreman's Office

Has this plan been coordinated with state or local government response organization Circle the appropriate response.

Yes .....

(No) .....

9.23 Who is responsible for monitoring worker safety at your facility? Circle the appropriate response.

Plant safety specialist .....

Insurance carrier .....

OSHA consultant .....

Other (specify) _____ .....

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 10 ENVIRONMENTAL RELEASE

General Instructions:

Complete Part E (questions 10.23-10.35) for each non-routine release involving the listed substance that occurred during the reporting year. Report on all releases that are equal to or greater than the listed substance's reportable quantity value, RQ, unless the release is federally permitted as defined in 42 U.S.C. 9601. or is specifically excluded under the definition of release as defined in 40 CFR 302.3(22). Reportable quantities are codified in 40 CFR Part 302. If the listed substance is not a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and thus, does not have an RQ, then report releases that exceed 2,270 kg. If such a substance however, is designated as a CERCLA hazardous substance, then report those releases that are equal to or greater than the RQ. The facility may have answered these questions or similar questions under the Agency's Accidental Release Information Program and may already have this information readily available. Assign a number to each release and use this number throughout this part to identify the release. Releases over more than a 24-hour period are not single releases, i.e., the release of a chemical substance equal to or greater than a RQ must be reported as a separate release for each 24-hour period the release exceeds the RQ.

For questions 10.25-10.35, answer the questions for each release identified in question 10.23. Photocopy these questions and complete them separately for each release.

PART A GENERAL INFORMATION

10.01 Where is your facility located? Circle all appropriate responses.

CBI

[ ] Industrial area .....

Urban area .....

Residential area .....

Agricultural area .....

Rural area .....

Adjacent to a park or a recreational area .....

Within 1 mile of a navigable waterway .....

Within 1 mile of a school, university, hospital, or nursing home facility .....

Within 1 mile of a non-navigable waterway .....

Other (specify) _____ .....

[ ] Mark (X) this box if you attach a continuation sheet.

10.02 Specify the exact location of your facility (from central point where process unit is located) in terms of latitude and longitude or Universal Transverse Mercader (UTM) coordinates.

Latitude ..... 42 ° 06 ' 45

Longitude ..... 75 ° 58 ' 20

UTM coordinates ..... Zone _____, Northing _____, Easting _____

10.03 If you monitor meteorological conditions in the vicinity of your facility, provide the following information.

Average annual precipitation ..... _____ inches/ye

Predominant wind direction ..... _____

10.04 Indicate the depth to groundwater below your facility.

Depth to groundwater ..... _____ meters

10.05 For each on-site activity listed, indicate (Y/N/NA) all routine releases of the listed substance to the environment. (Refer to the instructions for a definition

CBI Y, N, and NA.)

[ ]

On-Site Activity	Environmental Release		
	Air	Water	Land
Manufacturing	NA	NA	NA
Importing	NA	NA	NA
Processing	Y	NA	N
Otherwise used	NA	NA	NA
Product or residual storage	NA	NA	NA
Disposal	NA	NA	NA
Transport	NA	NA	NA

[ ] Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this questio
CBI and complete it separately for each process type.

[ ] Process type ..... Encapsulating / Potting

Stream ID Code	Control Technology	Percent Efficienc
7C	None	NA
7D		
7E		
7G		
7I		

[ ] Mark (X) this box if you attach a continuation sheet.

10.10 Emission Characteristics - - Characterize the emissions for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

[ ]

("U.K.")

Point Source ID Code	Physical State[1]	Average Emissions (kg/day)	Frequency[2] (days/yr)	Duration[3] (min/day)	Average Emission Factor[4]	Maximum Emission Rate (kg/min)	Maximum Emission Rate Frequency (events/yr)	Maximum Emission Rate Duration (min/event)

[1]Use the following codes to designate physical state at the point of release:
G = Gas; V = Vapor; P = Particulate; A = Aerosol; O = Other (specify) _____

[2]Frequency of emission at any level of emission

[3]Duration of emission at any level of emission

[4]Average Emission Factor -- Provide estimated (± 25 percent) emission factor (kg of emission per kg of production of listed substance)

[ ] Mark (X) this box if you attach a continuation sheet.

10.11 Stack Parameters -- Identify the stack parameters for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

[ ]

("U.K.")

Point Source ID Code	Stack Height(m)	Stack Inner Diameter (at outlet) (m)	Exhaust Temperature (°C)	Emission Exit Velocity (m/sec)	Building Height(m)[1]	Building Width(m)[2]	Vent Type[3]
E353	("U.K.")	("U.K.")	≈ 25				

[1]Height of attached or adjacent building

[2]Width of attached or adjacent building

[3]Use the following codes to designate vent type:

H = Horizontal
V = Vertical

[ ] Mark (X) this box if you attach a continuation sheet.

10.12 If the listed substance is emitted in particulate form, indicate the particle size distribution for each Point Source ID Code identified in question 10.09. Photocopy this question and complete it separately for each emission point source

CBI

[ ]

NA

Point source ID code ..... _____

Size Range (microns)	Mass Fraction (% ± % precision)
< 1	
≥ 1 to < 10	
≥ 10 to < 30	
≥ 30 to < 50	
≥ 50 to < 100	
≥ 100 to < 500	
≥ 500	

Total = 100%

[ ] Mark (X) this box if you attach a continuation sheet.

10.13 Equipment Leaks -- Complete the following table by providing the number of equipment types listed which are exposed to the listed substance and which are in service according to the specified weight percent of the listed substance passing through the component. Do this for each process type identified in your process block or residual treatment block flow diagram(s). Do not include equipment types that are not exposed to the listed substance. If this is a batch or intermittently operated process, give an overall percentage of time per year that the process type is exposed to the listed substance. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... _____

Percentage of time per year that the listed substance is exposed to this process type ..... _____

Equipment Type	Number of Components in Service by Weight Percent of Listed Substance in Process Stream					
	Less than 5%	5-10%	11-25%	26-75%	76-99%	Greater than 9
Pump seals[1]						
Packed						
Mechanical						
Double mechanical[2]						
Compressor seals[1]						
Flanges						
Valves						
Gas[3]						
Liquid						
Pressure relief devices[4] (Gas or vapor only)						
Sample connections						
Gas						
Liquid						
Open-ended lines[5] (e.g., purge, vent)						
Gas						
Liquid						

N/A

[1] List the number of pump and compressor seals, rather than the number of pumps or compressors

10.I3 continued on next page

[ ] Mark (X) this box if you attach a continuation sheet.

10.13 (continued)

[2]If double mechanical seals are operated with the barrier (B) fluid at a pressure greater than the pump stuffing box pressure and/or equipped with a sensor (S) tha will detect failure of the seal system, the barrier fluid system, or both, indica with a "B" and/or an "S", respectively

[3]Conditions existing in the valve during normal operation

[4]Report all pressure relief devices in service, including those equipped with control devices

[5]Lines closed during normal operation that would be used during maintenance operations

10.14 Pressure Relief Devices with Controls -- Complete the following table for those pressure relief devices identified in 10.13 to indicate which pressure relief devices in service are controlled. If a pressure relief device is not controlled, enter "None" under column c.

CBI

[ ]

NA

a. Number of Pressure Relief Devices	b. Percent Chemical in Vessel[1]	c. Control Device	d. Estimated Control Efficienc

[1]Refer to the table in question 10.13 and record the percent range given under the heading entitled "Number of Components in Service by Weight Percent of Listed Substance" (e.g., <5%, 5-10%, 11-25%, etc.)

[2]The EPA assigns a control efficiency of 100 percent for equipment leaks controlled with rupture discs under normal operating conditions. The EPA assigns a control efficiency of 98 percent for emissions routed to a flare under normal operating conditions

[ ] Mark (X) this box if you attach a continuation sheet.

10.15 Equipment Leak Detection -- If a formal leak detection and repair program is in place, complete the following table regarding those leak detection and repair procedures. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... NA

Equipment Type	Leak Detection Concentration (ppm or mg/m³) Measured at Inches from Source	Detection Device[1]	Frequency of Leak Detection (per year)	Repairs Initiated (days after detection)	Repairs Complete (days af initiated
Pump seals					
Packed					
Mechanical					
Double mechanical					
Compressor seals					
Flanges					
Valves					
Gas					
Liquid					
Pressure relief devices (gas or vapor only)					
Sample connections					
Gas					
Liquid					
Open-ended lines					
Gas					
Liquid					

[1]Use the following codes to designate detection device:

POVA = Portable organic vapor analyzer
FPM = Fixed point monitoring
O = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

10.16 Raw Material, Intermediate and Product Storage Emissions - - Complete the following table by providing the information on each liquid raw material, intermediate, and product storage vessel containing the listed substance as identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

Vessel Type[1]	Floating Roof Seals[2]	Composition of Stored Materials[3]	Throughput (liters per year)	Vessel Filling Rate (gpm)	Vessel Filling Duration (min)	Vessel Inner Diameter (m)	Vessel Height (m)	Operating Vessel Volume (l)	Vessel Emission Controls[4]	Design Flow Rate[5]	Vent Diameter (cm)	Control Efficiency (%)	Basis for Estimate[6]
					N/A								

[1]Use the following codes to designate vessel type:

F = Fixed roof
CIF = Contact internal floating roof
NCIF = Noncontact internal floating roof
EFR = External floating roof
P = Pressure vessel (indicate pressure rating)
H = Horizontal
U = Underground

[2]Use the following codes to designate floating roof seals:

MS1 = Mechanical shoe, primary
MS2 = Shoe-mounted secondary
MS2R = Rim-mounted, secondary
LM1 = Liquid-mounted resilient filled seal, primary
LM2 = Rim-mounted shield
LMW = Weather shield
VM1 = Vapor mounted resilient filled seal, primary
VM2 = Rim-mounted secondary
VMW = Weather shield

[3]Indicate weight percent of the listed substance. Include the total volatile organic content in parenthesis

[4]Other than floating roofs

[5]Gas/vapor flow rate the emission control device was designed to handle (specify flow rate units)

[6]Use the following codes to designate basis for estimate of control efficiency:

C = Calculations
S = Sampling

[ ] Mark (X) this box if you attach a continuation sheet.

PART E NON-ROUTINE RELEASES

10.23 Indicate the date and time when the release occurred and when the release ceased or was stopped. If there were more than six releases, attach a continuation sheet and list all releases.

Release	Date Started	Time (am/pm)	Date Stopped	Time (am/pm)
1				
2				
3				
4				
5				
6				

NA

10.24 Specify the weather conditions at the time of each release.

Release	Wind Speed (km/hr)	Wind Direction	Humidity (%)	Temperature (°C)	Precipitatic (Y/N)
1					
2					
3					
4					
5					
6					

[ ] Mark (X) this box if you attach a continuation sheet.

APPENDIX I: List of Continuation Sheets

Attach continuation sheets for sections of this form and optional information after this page. In column 1, clearly identify the continuation sheet by listing the question number to which it relates. In column 2, enter the inclusive page numbers of the continuation sheet for each question number.

Question Number (1)	Continuation Sheet Page Numbers (2)
NA	

[ ] Mark (X) this box if you attach a continuation sheet.